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December 31, 2002

Department Of Transportation
Federal Highway Administration

Proposed Rules - 23 CFR Part 658 RIN 2125 – AE90
FHWA Docket No.: FHWA-2001-10370 – 10

RE: Commercial Vehicle Width Exclusive Devices - Comments

Dear Sirs:

We recently received a copy of the above mentioned Proposed Rule (Federal Register Vol. 67, No. 145 dated July 29, 2002) from one of our transport industry customers in the USA (Weyerhaeuser Company).

TPC International supplies Tire Pressure Control Systems to transport companies in Canada & the USA. These systems electronically adjust & monitor the vehicle tire pressures, from the cab, while the vehicle is moving. A further description is provided in the attached Tireboss DOT Compliance document (pdf).

The systems incorporate external hoses over the drive tires of the truck. These hoses are non-property carrying devices and are positioned over the tires within the allowable limits for overwidth. A further description is also included in the pdf document.

Tire pressure control systems & tire pressure monitoring systems provide an important safety aspect to transport vehicles by maintaining the correct tire pressures for the vehicle. This safety awareness has been recognized through proposed legislation such as the T.R.E.A.D act introduced in the US in November 2000.

We would like to propose adding these vehicle attachments, referred to as **" Tire P ressure Control and Monitoring Devices"**, to the exclusion list identified in "*Appendix D to Part 658 – Devices That Are Excluded From Measurement Of the Length or Width of a Commercial Motor Vehicle*" – *Section 3.*

Our current practice is to notify each state that we enter & confirm compliance is in place for our systems with the state regulations. A reference in The Federal Rule 'excluded devices list' will provide further clarity.

Please respond with your decision in this matter.

Yours truly,

Brian Spreen

Brian Spreen
President

TIREBOSS™
SYSTEM DESCRIPTION

The ***TIREBOSS™ Tire Pressure Control*** system consists of a computerized Operator Control Unit (OCU), mounted in the cab, which monitors system activity and displays clear text messages to the operator of the vehicle. The OCU is linked to a computerized Valve Control Module (VCM) and pneumatic control valves located outside of the cab. The operator makes simple selections at the OCU, based on load and speed, which in turn sends messages to the VCM allowing the control valves to inflate or deflate the tire pressures within strict parameters set by the OCU.

The control valves are connected to the tire groups, and individual tire valve stems, through plumbing and various types of rotary couplings mounted at the wheel ends. The air is transferred into (or out of) the tires through this hardware while the vehicle is moving (See attached "SYSTEM OVERVIEW").

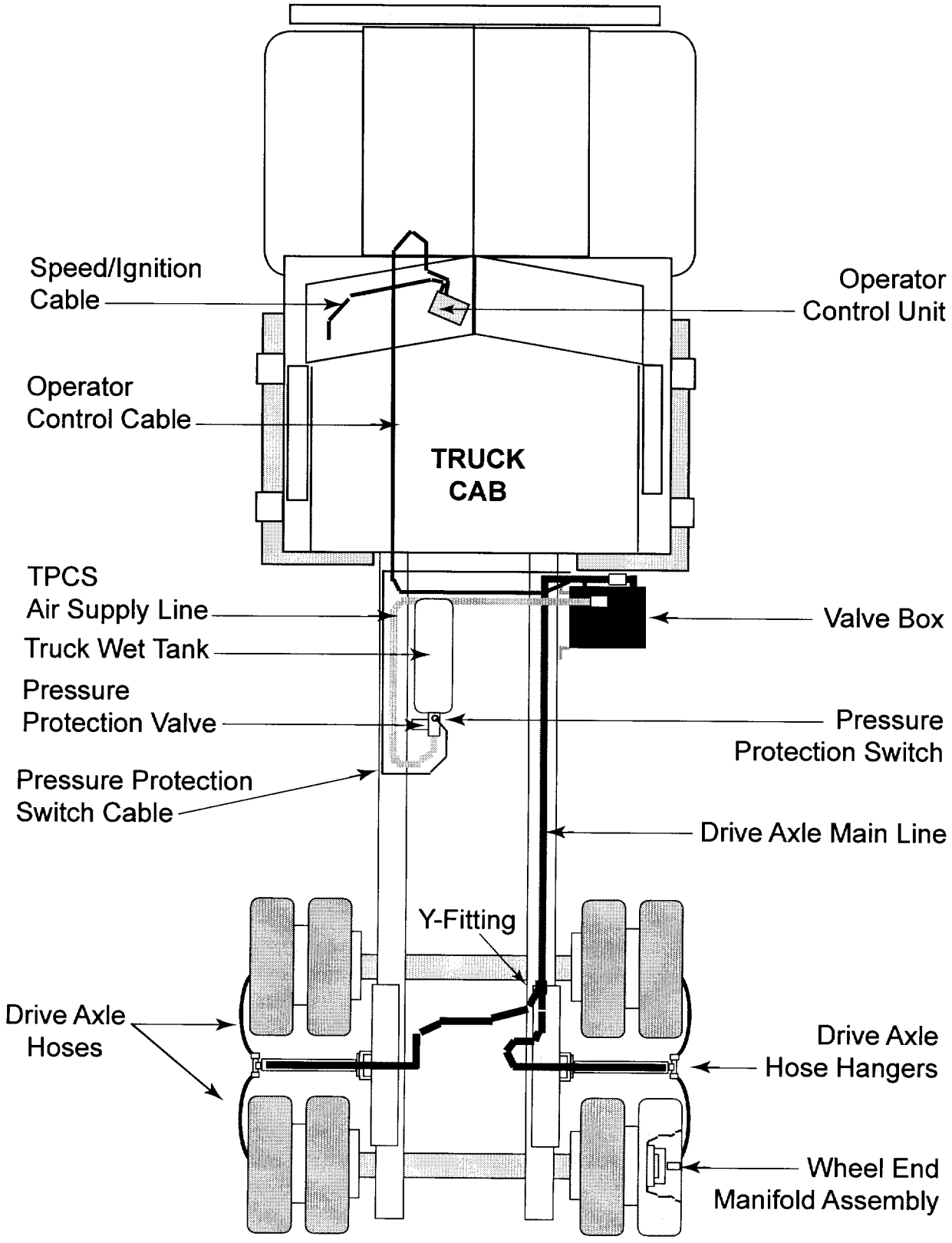
The control valves are supplied with air pressure from the vehicle's air brake system. The air brake system **always** has priority over the tire pressure system and is protected by two safety systems. First a pneumatic pressure protection valve closes air supply to the tire pressure system if brake tank pressure falls below 95 PSI. An electronic pressure switch that opens the electronic circuit if the brake tank pressure drops to 75 PSI backs this up. This switch also activates an alert ("LOW AIR SUPPLY") on the OCU and electronically prevents any inflation or deflation of the tire pressure system. The system will resume operation once air pressure builds above the safe limits.

Tire pressures are controlled to specific set points dependent on vehicle load and speed. Typical tire pressures change from 110 PSI, when fully loaded at highway speeds, down to 27 PSI when empty at reduced off-highway speeds. These pressure ranges are typical for truck transport vehicles that operate with a standard air supply system and adhere to guidelines set by the tire manufacturer for automotive applications (See attached "DESIGN GUIDE" from the Tire & Rim Association).

The upper & lower limits for air pressure control are 150 PSI and 10 PSI respectively and are based on the air supply capacity, pressure transducer limits and application. The control valves can accommodate up to 75 CFM. The operating pressure tolerances are –2/+20 from each set point. The upper tolerance allows for normal heat buildup in the tires. All of the operating tolerances are adjustable within the programming software.

The system has various built-in safety features to warn the driver of such things as over-speed conditions or tire failures. Warnings are both visual and audible (See attached "SAFETY FEATURES").

SYSTEM OVERVIEW



SAFETY FEATURES

The ***TIREBOSS Tire Pressure Control System*** (TPCS) incorporates a number of extremely important safety features to ensure the integrity of the vehicle, tires and the safety of everyone on the highways. These include features dealing with the following aspects of operation.

1. VEHICLE OVERSPEED CONDITION

If the vehicle's speed exceeds the set point for the current selected tire pressure, the OVERSPEED alert screen will be displayed and an audible alarm will sound alerting the operator of a vehicle OVERSPEED condition. If the vehicle OVERSPEED condition persists for longer than 1 minute, the system will automatically increase the selected pressure setting upward to the next higher tire pressure for the selected load.

2. LOW AIR BRAKE SUPPLY PRESSURE

A pressure protection valve and an electronic safety switch make sure that air is available for tire inflations only when vehicle system air brake pressure is above a safe level (95 psi). If the air brake pressure falls below a safe level, the LOW AIR SUPPLY alert will be displayed and the air supply is shut off to the TPCS. The supply of compressed air to the vehicle air brake system always has priority over the TPCS.

3. LOSS OF TIRE PRESSURE

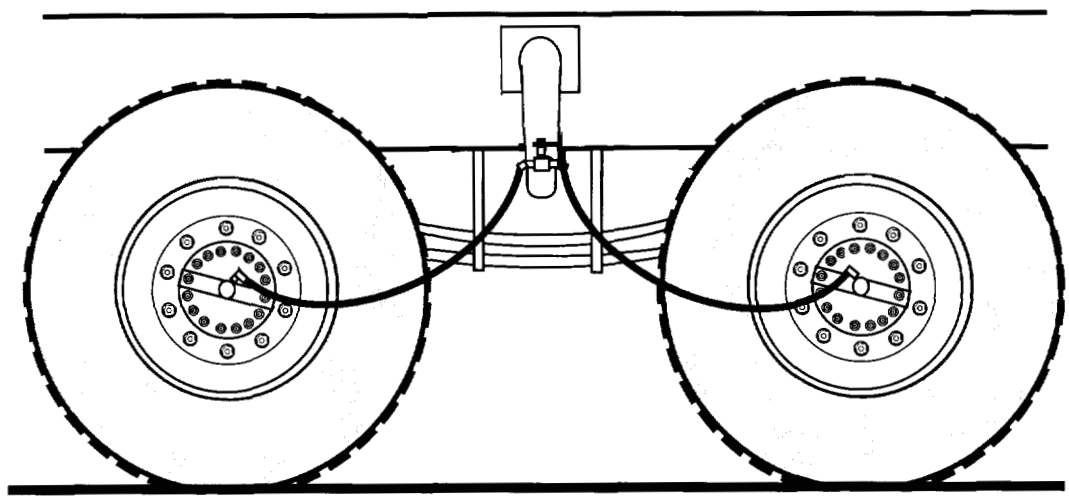
When an unexplained drop in tire pressure takes place in any of the zones, an audible alarm will sound. The tire pressure status display on the operator control unit will flash the zone display in which the loss of tire pressure has occurred and it will alternate with the TIRE PRESSURE LOSS alert. The source of the pressure drop must be located prior to continuing operation so that appropriate action may be taken, such as isolating the problem tire from the rest of those in the zone, through the use of manual shutoff valves.

4. TIRE HEAT BUILD UP

The ***TIREBOSS*** system automatically assigns upper and lower limits to the programmable set points. The system will trim the tire pressures for a preset time, after a new selection is made, to hone in on the new setting. Following the initial "trimming" time, the tire pressures are allowed to increase above the trim tolerance to allow for normal heat build up. If the tire pressure exceeds a maximum limit, the TIRE OVERHEAT alert will be displayed indicating an overheat condition in the tire which may be caused from improper pressure settings or a failure of other vehicle components, such as the brakes overheating.

In addition to the system safety features outlined above, it should be noted that the ***TIREBOSS*** systems use only quality components, such as DOT approved drive axle air hosing. The TPCS computer continuously monitors tire pressure and controls the inflating, deflating, or maintaining of a preselected target tire pressure. The systems carry operational decaling, which is further explained in an operator's manual carried in each vehicle.

DRIVE AXLE HOSE FEATURES



The ***TIREBOSS*** system uses external hoses over the drive axles of trucks to transfer the air into and out of the drive tires through rotating unions.

Although the external hoses are often a topic of discussion on durability, actual field use of this hardware has been very reliable even in the most severe applications. The easily maintained and simple design of this hardware have been a significant factor in minimizing related down time and repair costs.

The supply hoses are flexible and resistant to wear and are specially selected to work in this application. They are considered as soft assemblies similar to lights, mirrors and fenders. They also provide the added benefit of easy and simple maintenance on the road.

The external drive hose has been carefully selected for the following characteristics:

1. Provides an adequate inside diameter for air flow while maintaining a small outside diameter

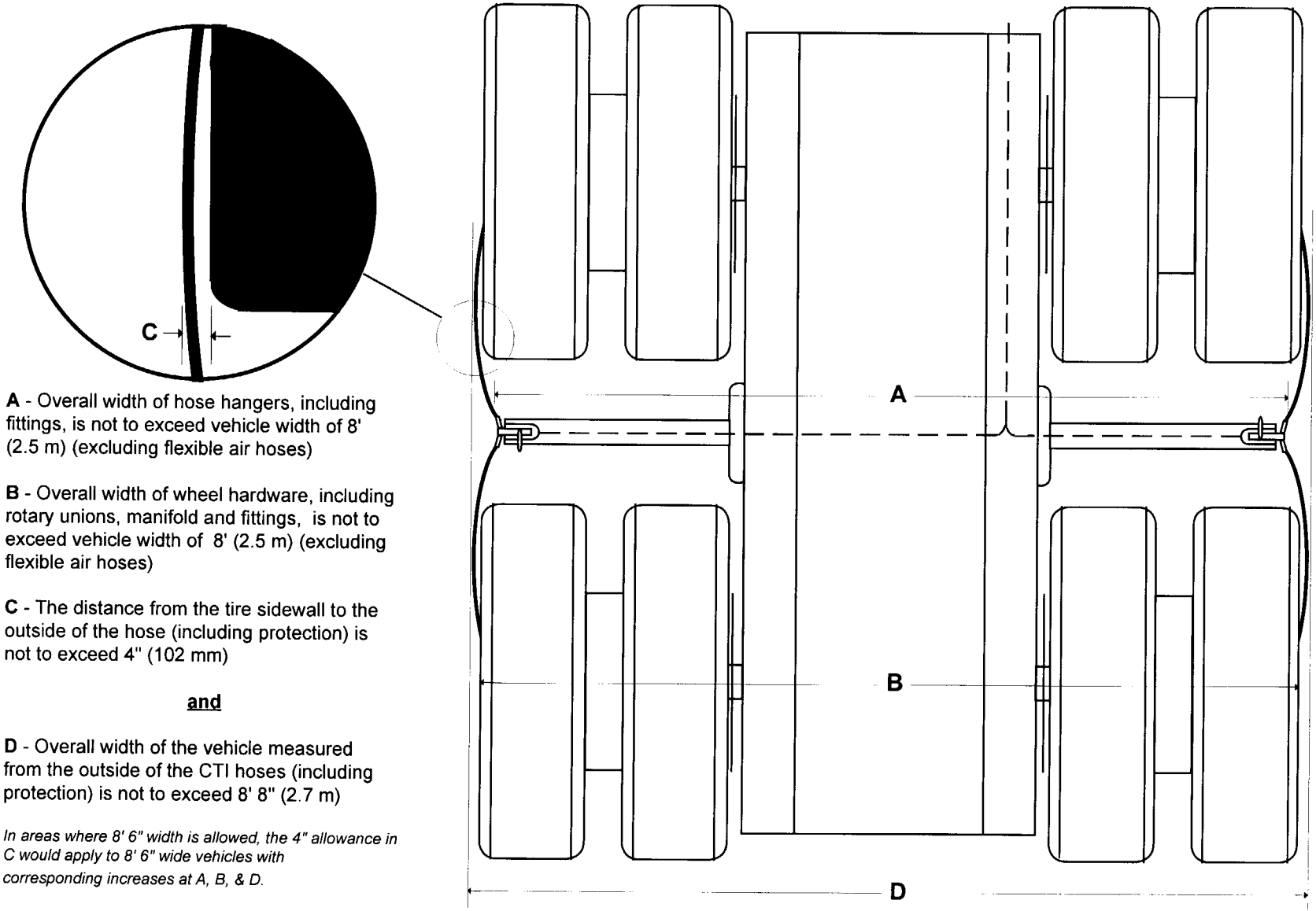
2. The fibre reinforced, abrasion-resistant urethane, smooth cover resists retention of foreign material and road grime, and provides excellent resistance to wear while allowing close fitting capabilities to the tire. A wire spring gaurd covers the hose for additional wear protection.

3. The 5/8" nylon reinforced hose provides optimum kink resistance and maintains a rigid form, yet it is extremely flexible throughout a wide temperature range.

4. The S.A.E. - J844 hose specification meets D.O.T F.M.V.S.S 106 (hose spec D.O.T 1913).

5. The orange colored outer covering provides high visibility for the driver and persons passing by the vehicle. This will ensure a safer vehicle through awareness of the attachments.

External Hose Specifications -Top View - **Drawing EXT-CTI-07 US**



A - Overall width of hose hangers, including fittings, is not to exceed vehicle width of 8' (2.5 m) (excluding flexible air hoses)

B - Overall width of wheel hardware, including rotary unions, manifold and fittings, is not to exceed vehicle width of 8' (2.5 m) (excluding flexible air hoses)

C - The distance from the tire sidewall to the outside of the hose (including protection) is not to exceed 4" (102 mm)

and

D - Overall width of the vehicle measured from the outside of the CTI hoses (including protection) is not to exceed 8' 8" (2.7 m)

In areas where 8' 6" width is allowed, the 4" allowance in C would apply to 8' 6" wide vehicles with corresponding increases at A, B, & D.

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Diagram 1

DESIGN GUIDE
REDUCED INFLATION PRESSURE LIMITS FOR TRUCK TIRES USED OFF HIGHWAY AT REDUCED SPEEDS (FOR SINGLE AND DUAL APPLICATIONS)

MAX. SPEED - 50MPH

TIRE SIZE	MINIMUM COLD INFLATION PRESSURES (PSI) AT VARIOUS LOADS (LBS.)										
DESIGNATION	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000
11R22.5	25	25	25	25	26	28	29	31	33	34	36
11R24.5	25	25	25	25	25	25	27	28	30	31	33
12R22.5	25	25	25	25	25	25	26	27	29	30	32
12R24.5	25	25	25	25	25	25	25	25	26	28	29
295/75R22.5	25	25	25	27	28	30	32	34	35	37	39
315/80R22.5	25	25	25	25	25	25	25	26	28	29	31

	3100	3200	3300	3400	3500	3600	3700	3800	3900	4000	4100
11R22.5	38	40	42	44	45	47	50	52	54	56	58
11R24.5	35	36	38	40	41	43	45	47	49	51	53
12R22.5	33	35	37	38	40	42	44	45	47	49	51
12R24.5	31	32	33	35	36	38	40	41	43	45	46
295/75R22.5	41	43	45	47	49	51	53	55	57	59	61
315/80R22.5	32	34	35	37	38	40	41	43	45	46	48

	4200	4300	4400	4500	4600	4700	4800	4900	5000	5100	5200
11R22.5	60	63	65	67	70	72	74	77	80	82	85
11R24.5	55	57	59	61	63	65	67	70	72	74	76
12R22.5	53	55	57	59	61	63	65	67	69	72	74
12R24.5	48	50	52	53	55	57	59	61	63	65	67
295/75R22.5	63	65	67	70	72	74	76	79	81	83	86
315/80R22.5	50	51	53	55	57	58	60	62	64	66	67

	5300	5400	5500	5600	5700	5800	5900	6000	6100	6200	6300
11R22.5	87	90	93	95	98	101	104	107	110	113	116
11R24.5	79	81	84	86	89	91	94	96	99	102	104
12R22.5	76	78	81	83	86	88	90	93	96	98	101
12R24.5	69	71	73	75	77	80	82	84	86	89	91
295/75R22.5	88	90	93	95	98	100	103	105	108	110	113
315/80R22.5	69	71	73	75	77	79	81	83	85	87	89

For 295/75R22.5, K=1.003
For 315/80R22.5, K=1.037
For 11R and 12R, K=1.16

7/27/99